North Dakota State Investment Board

April 2007

INFRASTRUCTURE: A NEEDED INVESTMENT

The following is a summary of a research paper written by State Investment Board consultant, Paul Erlendson, Senior Vice President, Callan Associates Inc.

What is Infrastructure?

Dictionary.com defines infrastructure as "the basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons." The vast majority of these facilities have traditionally been designed, owned, operated, and regulated by governments and public entities.

Budget and fiscal pressures are limiting the ability of public authorities to maintain existing infrastructure much less to build the new facilities required by a growing population. In response to these problems, many municipalities and states have sold some of their infrastructure assets to

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private investors. Other governmental authorities are also looking more favorably on the idea of selling off public assets to private sources of capital and relying on their expertise as the means to upgrade the nation's infrastructure.

Infrastructure investment strategies may focus their attention on US, global or international (both developed and developing markets) opportunities. While Australian, Canadian, and European investors have engaged in "infrastructure" projects for more than a decade, the concept is relatively new and unfamiliar to most US investors.

Proponents suggest that the asset class can provide reliable, inflation-adjusted income streams, and long-lived assets. If that's true, infrastructure may be ideally suited to offset the long-term nature of pension liabilities.

How great is the need?

A variety of independent sources has sought to quantify the unrealized demand for public spending on infrastructure. Estimates have been put forth demonstrating that public sources of capital will be unable to meet the growing demands to build and maintain the nation's economic and social infrastructure—that is, without massive increases in taxes or cuts in other essential programs. Or both. While governments have historically bankrolled the majority of these projects, private capital is quickly and quietly becoming an indispensable element of the nation's infrastructure funding solution.

Merrill Lynch says that it would take an annual investment of \$92 billion over each of the next 20 years merely to maintain the current condition of the nation's roads and bridges. The American Association of Ports Authorities has indicated that the volume of trade moving through the United States' 360 commercial seaports will require additional investments of \$2 billion annually in order to keep pace with the growth in global cargo and passenger ship activity. The American Water Works Association reports that even though local water systems spend over \$25 billion annually on capital improvements, the gap between current and required spending is projected to be \$300 billion over the next 20 years.

A survey of institutional infrastructure investing

Australian, Canadian, and European institutional investors have preceded their US counterparts with infrastructure investing. Government mandated reforms in the Australian pension system in the early 1990s led to huge

Continued on page 3

FROM THE DIRECTOR'S CHAIR

GOLIATH BEATS DAVID! (and other interesting things...)



Steve Cochrane, CFA Executive Director/CIO

The North Dakota State Investment Board (SIB) was recently invited to participate in Institutional Investor **Events and Information Management** Network's Money Management Letter 6th Annual Public Pension Fund Awards for Excellence ceremony. As one of three nominees for the award of "2007 Savviest Public Pension Plan," we wondered how our little old plan (\$3.9bb) in North Dakota was chosen. Turns out, "the savviest award goes to a pension plan of any size that has a track record not only of good returns and sound investment decisions, but of innovation." Of course, we were honored to be included as a nominee, but the Tiffany crystal memento went to the Ontario Teachers' Pension Plan, an \$85 billion industry powerhouse. This Goliath truly deserves the distinction, as they are one of the most innovative investment funds in the world, public or private, period. As a leading edge investor, this Toronto-based fund recently opened a London office to improve their ability to invest internationally! Hats off to our neighbors to the north!

If you would like to follow along with this next section, pull out your September 2006 edition of this newsletter! I sent a copy of it to George, my old college roommate, who has been an editor at the Palm Beach Post (FI)

newspaper for 30 years. Here's the email I received after he read it:

Hi Steve:

Just got your "Vested Interest" newsletter.

Congratulations on your award for excellence in financial reporting.

No offense, but either your newsletter is strictly aimed at financial geeks, or it desperately needs an editor, assuming you expect laymen to understand it.

The headline on Page 1 says "SIB Focus." What's an SIB? An article on Page 2 repeatedly mentions PERS and TFFR. Eh? Don't use acronyms, especially in headlines, unless your visiting cousin from Itscrackedistan would recognize it. That pretty much limits you to FBI and CIA.

Also, from that first article, the author would make an excellent diver, he never needs to come up for air. In addition to being larded with financial gibberish, I counted sentences 44, 46, 50, 51, 65 and 67 words long. I was always told to read a sentence out loud. If you can't do it in one breath, find a place for a period. Shorter sentences force the writer to be clear and easier for the reader to understand.

What ARE "beta exposure" and "enhanced indexation" anyway? And what's the difference between "interactive discussion" and "discussion?" Aren't ALL discussions "interactive?"

On Page 2, an article is titled "From the Director's Chair," but it didn't have a byline and I don't see anyone with that title listed on Page 1. I'm guessing you, the EXECUTIVE Director, wrote it. There's a difference. Don't some groups have both?

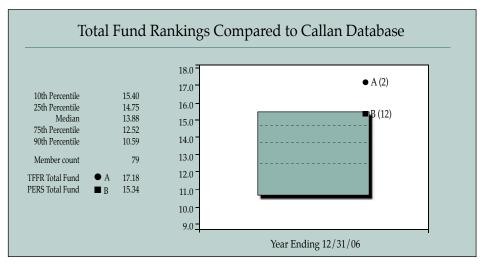
I've never seen a "floating bar chart" before. I'm glad the text explained things, the chart didn't.

End of rant.

See ya – George

I got a big kick out of that! Maybe you have felt the same way when you read "Your Vested Interest"! I will continue with my D+ writing style and hope that you will continue to hang in there!

Meanwhile, on the investment front, things continue to percolate along. TFFR and PERS continue to outperform their benchmarks, on a net return basis, as illustrated on the bar charts for the 1, 3, and 5-year periods ended December 31, 2006. Relative performance to the universe of public pension plans is also healthy, as shown in the "floating bar chart" below (sorry, George). This compares our gross returns with those of 79 other similar plans. Without going into the technical details of this chart, suffice it to say that the higher the dots on the chart, the better! TFFR ranks in the top 2% of funds, while PERS turned in a top 12% performance!



STATE INVESTMENT BOARD HONORED

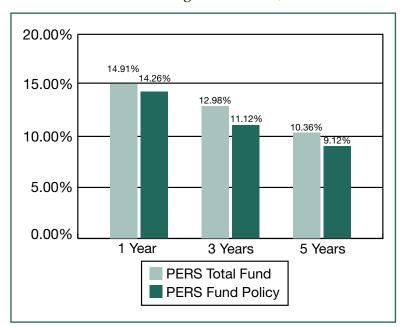
Money Management Letter, a well known investment publication, recently announced nominees for its Annual Public Pension Funds Awards for Excellence. The North Dakota State Investment Board (SIB) was nominated for the "Savviest Public Plan of the Year." The nomination credits Steve Cochrane, CIO, and the State Investment Board as having a cutting edge approach to investment strategies. In addition, managers describe the Board members as "well educated, they do their homework, and ask tough questions to create a portfolio incredibly diversified

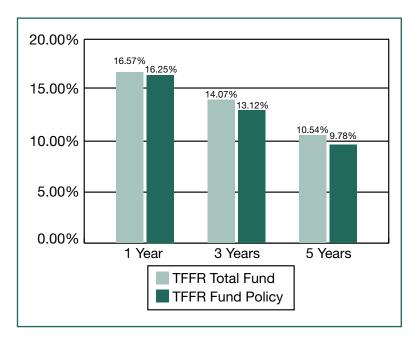
into asset classes a lot of plans are not up to speed on."

Although the SIB did not receive the award, it was an honor to be nominated and recognized for the extra efforts the SIB provides to the investment program.

NET INVESTMENT PERFORMANCE

Periods Ending December 31, 2006





INFRASTRUCTURE: A NEEDED INVESTMENT continued...

increases in contributions. This funding policy change coincided with a pressing need for investments in infrastructure that the public sector was unable to meet. Consequently, Australian pension funds began adopting allocation targets for infrastructure investments of up to 10% of Total Fund assets. Canadian pension funds have also been investing in infrastructure for some time, with long-term target allocations of 10% to 15%. Large US investors have begun evaluating this investment arena with few – like the North Dakota State Investment Board – actually making commitments to the asset class.

Summary

Investing in infrastructure has been shown to provide great returns to pension funds. As with any long-term investment, Plan Trustees must evaluate a series of trade offs between expected returns, risk tolerances and time horizons. There are specific risks of which potential investors should be aware so they can evaluate whether or not the projected return potential is adequate given the types of risks involved in making the investment. With education, proper due diligence, and careful strategic planning, investors may be able to help fund pension plans while helping improve the very infrastructure required for the dynamic economic growth of the larger community.

2006 ANNUAL FINANCIAL REPORT AVAILABLE

The North Dakota Retirement and Investment Office Comprehensive Annual Financial Report (CAFR) may be viewed from our website, <code>www.nd.gov/rio</code> or a copy may be requested by contacting the administrative office. This report is a complete review of the financial, investment, and actuarial conditions of the State Investment Board and the Teachers' Fund for Retirement.



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